

Point Source and Nonpoint Source Water Pollution

Water pollution is defined as any contamination of water that reduces its usefulness or causes harm to living organisms, including humans. According to the **Clean Water Act Amendments of 1987**, water pollution can be divided into two main classes: **point source water pollution** and **nonpoint source water pollution**. Making the distinction between point source and nonpoint source water pollution is not always easy.

Point source water pollution occurs when pollutants enter water directly from a specific, clearly identifiable source. Point source water pollution is relatively easy to identify and control. A pipe discharging polluted water from a factory into a lake, or a gas station's leaking underground gasoline storage tank are examples of point source pollution. In general, if the pollution can be stopped by an action such as shutting a valve, blocking a canal, or removing a leaking underground storage tank, it is a form of point source pollution.

When the exact source of pollutants cannot be clearly identified or when pollution comes from a wide area of land, the pollution is classified as **nonpoint source** water pollution. Nonpoint source water pollution can result from stormwater runoff picking up contaminants, such as oil in a shopping mall parking lot or sediments from a construction site, and transporting these to a wash, stream, or reservoir. Other sources of nonpoint pollution include livestock wastes, excess pesticides sprayed on plants in yards or agricultural fields, swimming pool chemicals drained into an alley, or swimmers using a favorite swimming spot as a toilet. Over half the pollutants in our nation's streams come from nonpoint sources.

Because of its many sources, nonpoint pollution can be difficult to control. Land use changes can greatly reduce it, but may not entirely stop it. It is important that we identify things that can be done to reduce this type of pollution. Can you think of any examples of nonpoint source water pollutants that come from your home, school, or community? How can they be reduced to help prevent nonpoint source water pollution?

-AZWET Book 1
Non-point source water
pollution curriculum

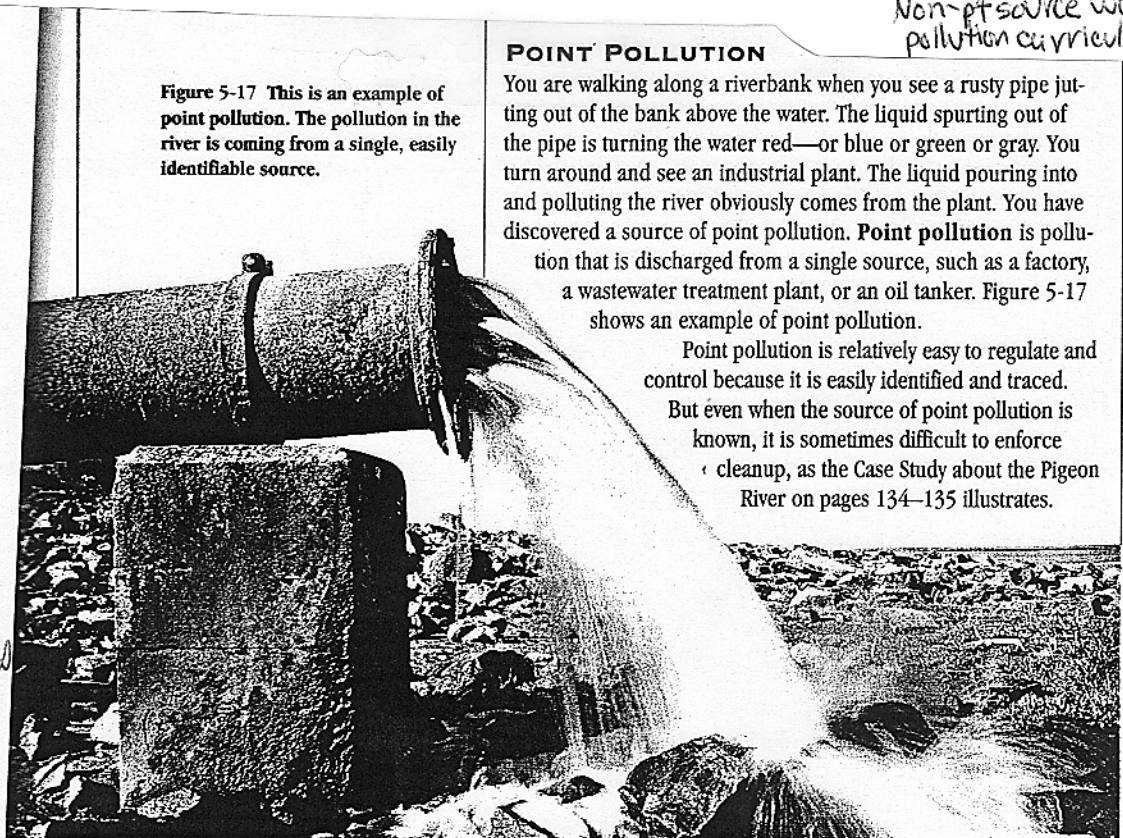
Figure 5-17 This is an example of point pollution. The pollution in the river is coming from a single, easily identifiable source.

POINT POLLUTION

You are walking along a riverbank when you see a rusty pipe jutting out of the bank above the water. The liquid spurting out of the pipe is turning the water red—or blue or green or gray. You turn around and see an industrial plant. The liquid pouring into and polluting the river obviously comes from the plant. You have discovered a source of point pollution. **Point pollution** is pollution that is discharged from a single source, such as a factory, a wastewater treatment plant, or an oil tanker. Figure 5-17 shows an example of point pollution.

Point pollution is relatively easy to regulate and control because it is easily identified and traced.

But even when the source of point pollution is known, it is sometimes difficult to enforce cleanup, as the Case Study about the Pigeon River on pages 134–135 illustrates.



Arms, K (1996)
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